

## CLAIMS

1. A method for use in a network in which a plurality of payloads are initially carried on a link of a path are over said path in accordance with a predetermined protocol, the method comprising:

utilizing a tandem connection layer of said protocol, in response to a failure in a link in the path, to combine and manage said payloads as a single logical entity on at least one other link independent of the different payload capacities of said plurality of payloads and without individually rerouting each payload, the management of said single logical entity being based on information embedded in the tandem connection layer of the protocol.

2. An apparatus for routing data over a network in which a plurality of payloads are routed on a link in a path in accordance with a predetermined protocol, the apparatus comprising:

(a) a processor;

(b) a port; and

(c) a memory coupled to said port and said processor, said memory storing instructions adapted to be executed by said processor to utilize a tandem connection layer of said protocol, in response to a failure of said link, to combine and manage said payloads as a single logical entity on at least one other link independent of the different payload capacities of said plurality of payloads and without individually rerouting each payload, the management of said single logical entity being based on information embedded in the tandem connection layer of the protocol.

3. A method for use in a SONET network comprising at least first, second and third cross-connects, the method comprising

establishing a SONET tandem connection over a set of links from said first cross-connect to said second cross-connect via said third cross-connect, said SONET tandem connection being in conformance with ANSI standard T1.105.05;

routing one or more payloads between said first and second cross-connects over another link; and

responsive to a failure of said another link, combining and rerouting said payloads over said set of links as a single logical entity utilizing said SONET tandem connection and without individually rerouting each payload, management of said single logical entity being based on the Z5 path overhead byte of at least one of said payloads. said combining and said management being performed independent of the different payload capacities of said payloads.